

Figs. 4A, 4B and 4C show the variations of certain magnitudes (resistance/square, absolute magnetoresistance, relative magnetoresistance), inherent in the first variant as a function of the thickness of the separating, nonmagnetic layer.

Page 4, lines 30-33, please amend the paragraph to read as follows:



Figs. 6A, 6B, 6C and 6D show the variations of certain magnitudes (resistance/square, absolute magnetoresistance, relative magnetoresistance and conductance/square) for different specular reflection contrasts as a function of the thickness of the separating, nonmagnetic layer.

Page 5, lines 2-5, please amend the paragraph to read as follows:



Figs. 9A, 9B and 9C show the variations of the resistance/square, absolute magnetoresistance and relative magnetoresistance as a function of the thickness of the nonmagnetic layer for the second variant of the invention.

Page 6, lines 32-34, please amend the paragraph to read as follows:



Figs. 4A, 4B and 4C show the resistance/square variations (4A), the relative magnetoresistance  $\Delta R/R$  (4B) and the absolute magnetoresistance/square (4C) as a function of the thickness t of the nonmagnetic layer in nanometers.

Page 7, lines 2-10, please amend the paragraph to read as follows:



Thus, these drawings show the transport properties which can be obtained in the ideal case, where the reflection is perfectly specular for one category of electrons and totally diffuse for the other category of electrons. The relative magnetoresistance amplitude can be extremely high in this case, several dozen per cent compared with 10 to 15% in the best, presently available spin valves. The absolute magnetoresistance amplitude is particularly high in view of the high resistance of these layers. It can reach several dozen  $\Omega$ /square, whereas it is approximately 2 to 3 ohms in the best existing spin valves.

Page 8, lines 30-41, please amend the paragraph to read as follows:

This second variant makes it possible to establish whether a material R has spin-dependent reflection effects at the interface R/NM. It is in fact sufficient to implement a structure in the form substrate (e.g. Si)/Ta, 5 nm/Ni<sub>80</sub>Fe<sub>20</sub>, 4 nm/Co<sub>90</sub>Fe<sub>10</sub>, 1 nm/Cu 2.5 nm/R 20 nm and then measure the resistance of said structure in a field varying from -100 Oe to +100 Oe, in which it is certain that the magnetization of the NiFe/CoFe layer has changed. If a magnetoresistance effect linked with the passage from parallelism to antiparallelism of the magnetizations of F and R, then the material R has a spin-dependent reflection which can be quantified with the aid of a semiclassical theory. However, if no resistance change has been observed, then the material R can have specular reflection, but the latter is not dependent on the electron spin.

Page 9, lines 31-37, please amend the table to read as follows:

Volume parameters:

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Material	mean free	mean free
	path (nm) spin ↑	path (nm) spin↓
NiFeCr	0.4	0.4
$Ni_{80}Fe_{20}$	7	0.7
Co <sub>90</sub> Fe <sub>10</sub>	9	0.9
Cu	12	12

Page 10, lines 31-35, please amend the table to read as follows:

Material	mean free	mean free
	path (nm) spin †	path (nm) spin↓
NM (Cu)	12	12
Co <sub>90</sub> Fe <sub>10</sub>	9	0.9